Figure 34:
Lincoln Area Current and Future Trails Network

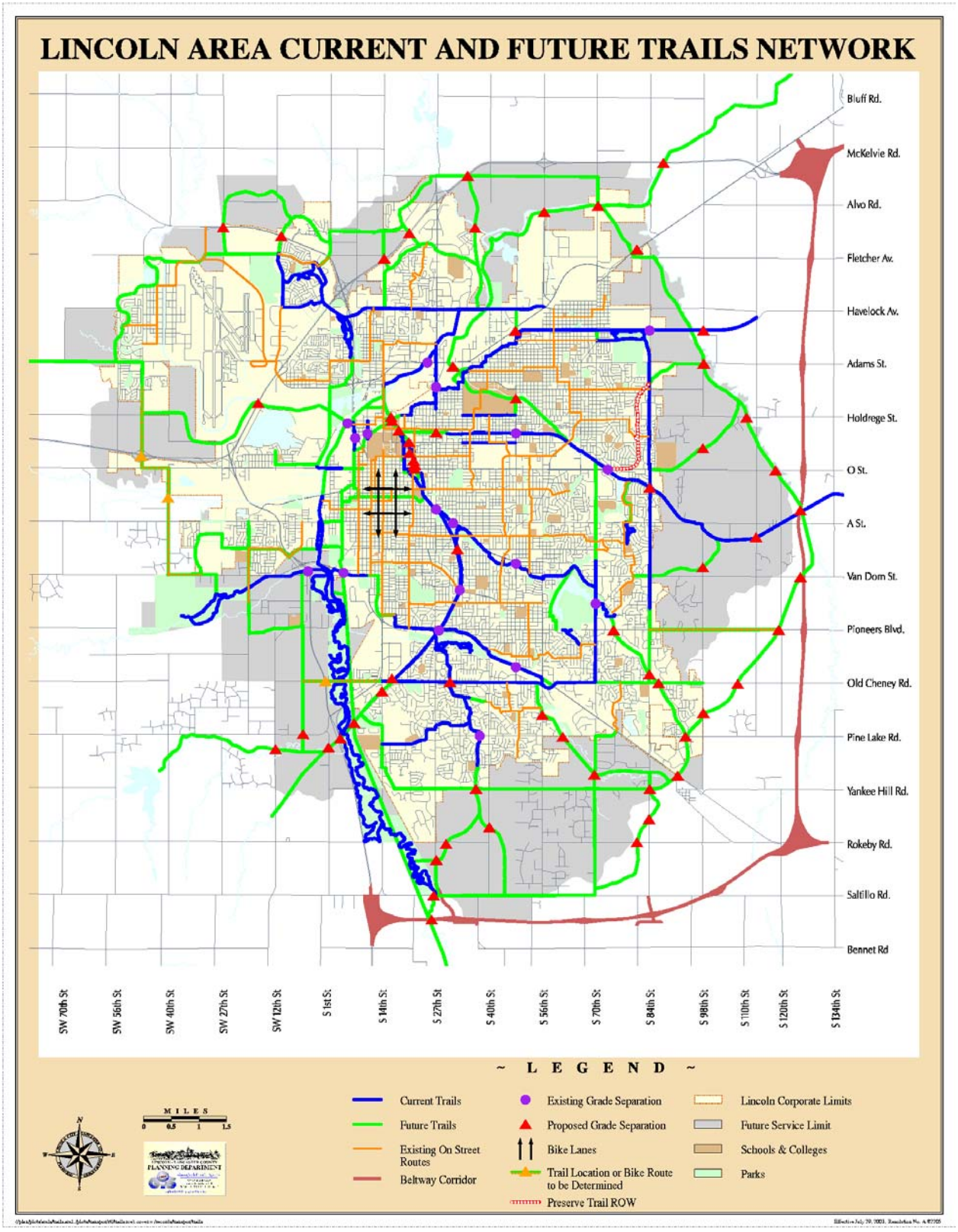


Figure 35:
Existing and Proposed Commerce Centers

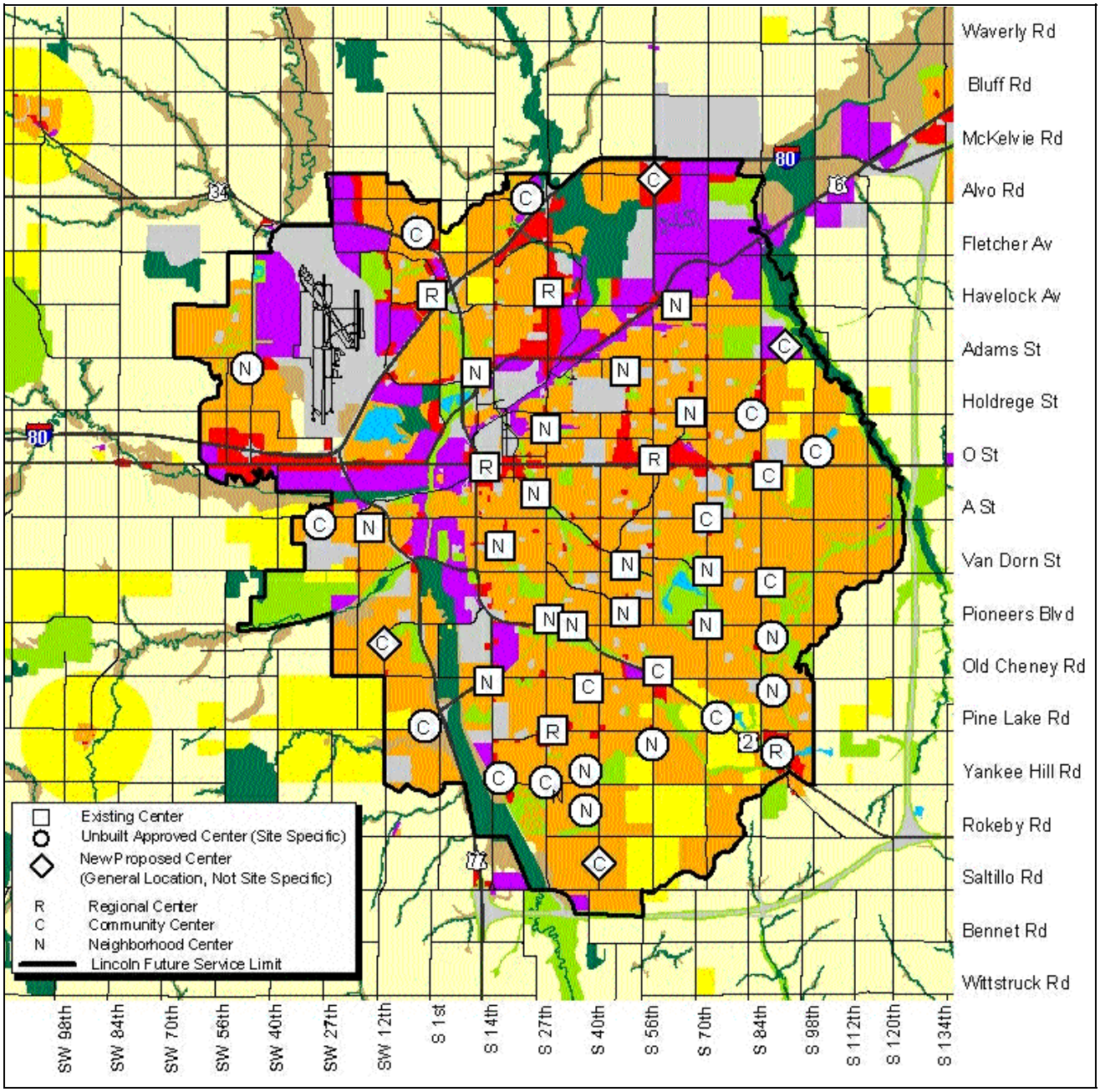
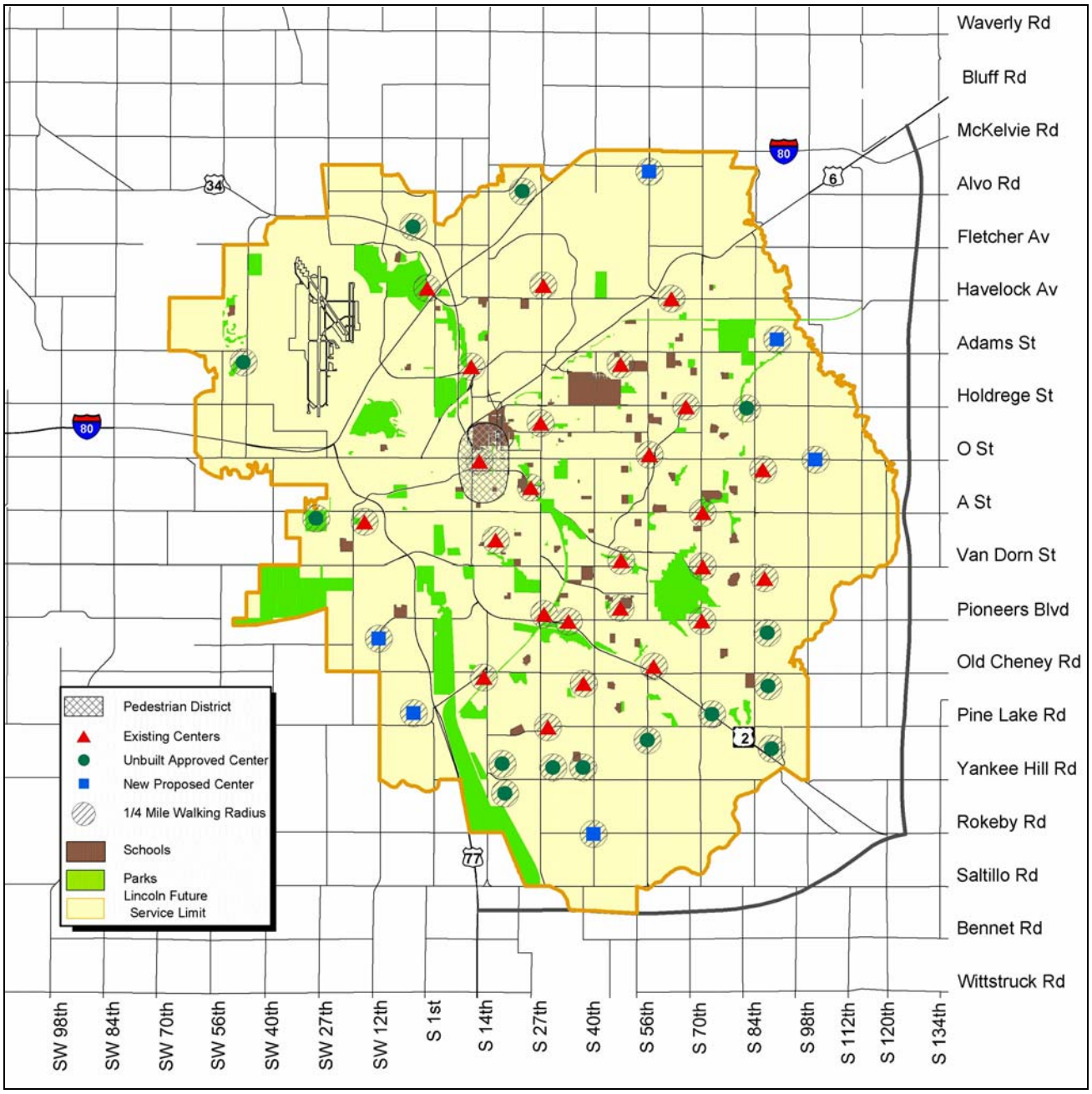


Figure 36:
Pedestrian Activity Centers Plan



Long-Range Transportation Plan

The Mobility and Transportation chapter of the *Lincoln-Lancaster County Comprehensive* plan serves as the federally-required Long-Range Transportation Plan for the Lincoln Metropolitan Planning Organization.

The Mobility and Transportation chapter of the *Lincoln-Lancaster County Comprehensive Plan* emphasizes the importance of a balanced and sustainable transportation system that not only provides mobility but helps create an attractive city. It states that while the transportation system must function well for private autos and trucks, it "should also establish public transportation, bicycling and walking as realistic alternatives now and in the future." Lincoln is slowly working toward that challenging goal with this Multi-Modal Transportation Study and other initiatives.

Transit Principles

The Transportation Plan calls for transit-friendly development that includes:

- Direct and continuous pedestrian connections to and from the transit stops
- Mixed-use, high density development near transit stops
- Development designs supportive of transit riders.
- A walkable environment among the activities in the immediate vicinity of the transit stops

The transit plan is focused on Downtown as the center of activity and major concentration of trip ends.

StarTran route planning should:

- Near Term: Maintain the current radial network to Downtown and provide supplemental service to other portions o the urban area with convenient transfer options.
- Long-Term: Expand the modified grid system while maintaining the productive elements of the radial system serving Downtown. Reallocate less productive radial service into grid services by targeting emerging mixed-use activity centers and corridors.

The *Comprehensive Plan* calls for much of the non-residential development to occur in "centers" across the city. These "commerce centers" would contain a mixture of retail, office, services and residential development with some light manufacturing and warehousing in selected circumstances. Commerce centers are differentiated from Industrial Centers, which have more industry, trucking and noise. Commence Centers include Regional Centers (Downtown), Community Centers and neighborhood Centers.

The plan calls for a mixture of land use types, a pedestrian orientation and transit opportunities. For Lincoln to become more oriented toward bus transit, bicycling and walking, the Community and Neighborhood Centers will have to increase their density, diversity, size and walkability. They will have to each be served by bicycle lanes, bicycle paths, and sidewalks. Presently, the commerce centers are highly auto-oriented, and some have little or no chance of being served by other modes.

The Plan also identifies existing, emerging and planned Regional and Community centers, a few of which are listed here as examples:

- Regional Centers: UNL Technology Park
  The North 27th and Superior Street Subarea
  The South 84th Street and Highway 2 area.
  South Pointe (Pine Lake Road at 27th Street)
- Community Centers: Firethorn / Lincoln Benefit Life Office Park
  State Farm Office Campus at South 84th and O Street
  Williamsburg Village (South 40th and Old Cheney Road)
  Stonebridge Creek (North 27th and Interstate 80)
  East O Street in the vicinity of 90th to 104th Streets

Pedestrian Districts and Centers

Pedestrian centers are essential to the idea of a more transit-oriented community.
Pedestrian Districts include areas such as Downtown (including the university campus), University Place, College View and Havelock. Pedestrian Centers tend to be located along arterial roads and often have strip commercial neighborhood shopping centers.

Safe and convenient sidewalks are essential to the walking environment in all of these locations. Unfortunately, most of them tend to be overly oriented to the auto at this time, with the exception of Downtown. More could be done in the future to retrofit and intensify these and other pedestrian areas if Lincoln is to achieve a gradual shift from its reliance on the auto.

Interconnected Streets and Sidewalks

The principle of interconnected streets and sidewalks is enunciated in the Residential Area Plan and in the Mobility and Transportation Plan. This feature is very supportive of both bicycling and walking.

In practice, while local streets are being fully connected within each square mile, there is no clear and direct path across the square mile neighborhood because of the highly curvilinear street pattern.

Beltway

The East and South Beltways are a planned four-lane circumferential highway network around the City of Lincoln. (The highway will be south of Saltillo Road and east of 120th Street.)

Of the two beltway alignments, the South Beltway will be built first, within the first half of the planning period. This improvement is considered a committed City project.

Proposed Beltway interchange locations are at:

South Beltway:
- South Beltway and US 77
- 30th Street
- 68th Street
- South 84th Street
- Nebraska Hwy. 2

East Beltway:
- Interstate 80
- Fletcher Avenue
- Adams Street
- "O" Street
- Pioneers Boulevard
- Pine Lake Road
- Nebraska Hwy. 2

Antelope Valley Project

Antelope Valley involves a partnership of the City of Lincoln, the Lower Platte South Natural Resource District, and the University of Nebraska-Lincoln and envisions a multi-lane (four to six lanes) boulevard with dual left-turn lanes and a landscaped center median. The project includes several major flood control improvements.

Comparison with Similar Cities

Selection of Peer Cities

Several cities were selected with which to compare Lincoln on characteristics of transit service, funding and cost-effectiveness.

Lincoln, Nebraska, is a mid-size urban area (2000 Census population: 226,582) that serves as a state capital and provides home to three universities and several colleges. An initial list of comparison (or "peer") cities was created by selecting urban areas with a population between 150,000 and 400,000. Further screening eliminated those that do not share Lincoln's role as an government center or a university community.

The final list of peer cities was created by using these criteria:
- Year 2000 population is between 150,000 and 400,000
- State Capital
- Home of at least one accredited university

The fourteen urbanized areas (including Lincoln) that matched the criteria are listed and described in Table 34.

Table 34
Peer Cities of Lincoln

Urban Area	State	Population	Land Area (Sq. Miles)	Population per Square Mile	Enrollment at Largest College or University	Region of US
Springfield	IL	153,516	87	1,762	< 5,000	Midwest
Charleston	WV	182,991	113	1,614	< 5,000	East
Montgomery	AL	196,892	99	1,994	< 5,000	South
Tallahassee	FL	204,260	114	1,794	20,000+	South
Salem	OR	207,229	69	2,994	< 5,000	West
Springfield	MO	215,004	114	1,894	15-20,000	Midwest
Lincoln	**NE**	**226,582**	**78**	**2,901**	**20,000+**	**Midwest**
Lexington (1)	KY	250,994	70	3,586	25,000+	South
Jackson	MS	292,637	161	1,819	15-20,000	South
Lansing	MI	300,032	137	2,192	20,000+	Midwest
Madison	WI	329,533	114	2,893	20,000+	Midwest
Little Rock	AR	360,331	206	1,753	10-15,000	South
Harrisburg	PA	362,782	208	1,741	10-15,000	East
Des Moines	IA	370,505	140	2,640	5-10,000	Midwest

(1) Not a state capital

Other urban areas considered but not recommended were:
- Sioux Falls, SD- population is below 150,000 and it is not a state capital
- Tulsa, OK - population is above 400,000 and it is not a state capital.

Comparisons

The following tables and text describe the relationship between Lincoln and the cities listed above on these characteristics:

- Demographics
- Highway system
- Regular transit service
- Demand-responsive transit service
- Transit funding

Summary of Findings

Demographics

Lincoln's population is in the mid range and its land area is somewhat smaller than the thirteen cities selected for comparison. However, its population density (expressed as persons per square mile) is above the peer city average, which is a good characteristic for transit ridership, bicycling and walking.

Highway System

Although Lincoln is near the peer city average for it is total number of road miles, it is well above average for road miles per capita and per land area. On the other hand, Lincoln is below the peer cities average for the number of miles driven daily, especially on freeways. This discrepancy may indicate that Lincoln has many miles of road that are not as heavily used as those of its peers. It is also reflective of the fact that Lincoln has relatively few miles of freeway.

Regular Transit Service

Lincoln is below the peer cities average on the measures where it would want to be higher than average, such as revenue miles per square mile and capita, and passengers per revenue hour, revenue mile and capita. Likewise it is above average on expense per passenger, revenue hour and capita.

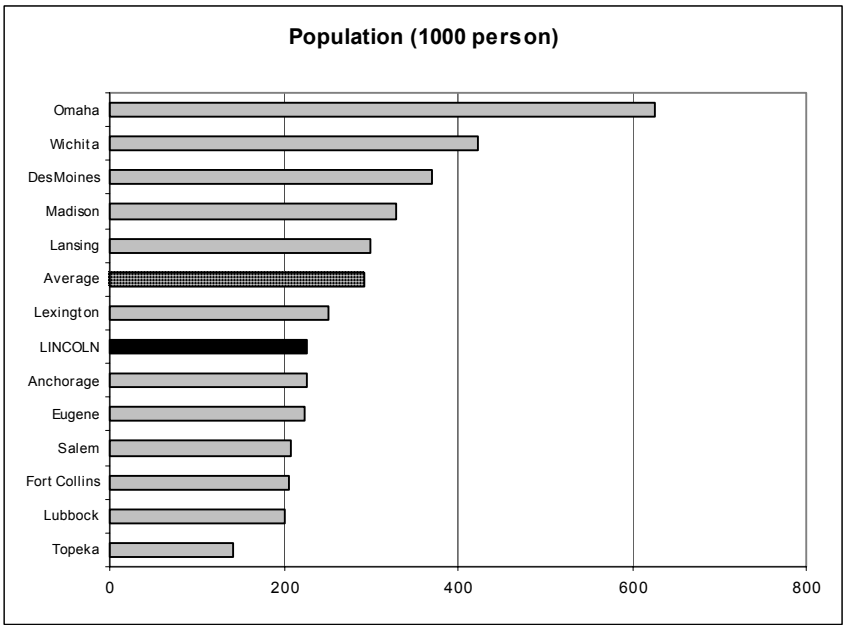
Demand-Responsive Transit Service

Similar to its situation with regular transit service, Lincoln is far below the average of its peer group for measures such as revenue miles per square mile of city and per capita, but only slightly below average for passengers per revenue hour and per revenue mile. It is above average for expense per passenger and per revenue hour, but below on expense per capita.

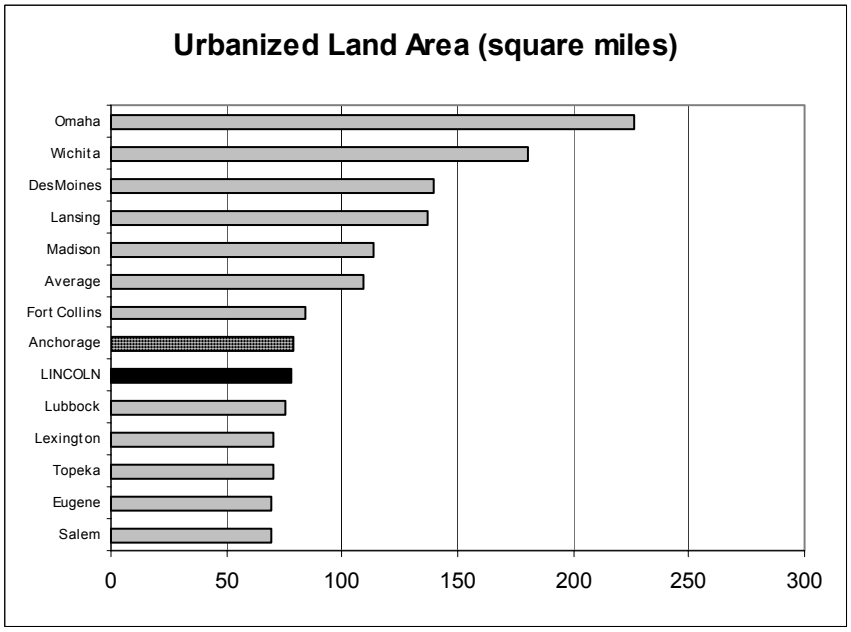
Transit Funding

Lincoln falls well below the average of the peer cities in farebox recovery (the percentage of transit costs paid by passengers), state funding and federal funding.

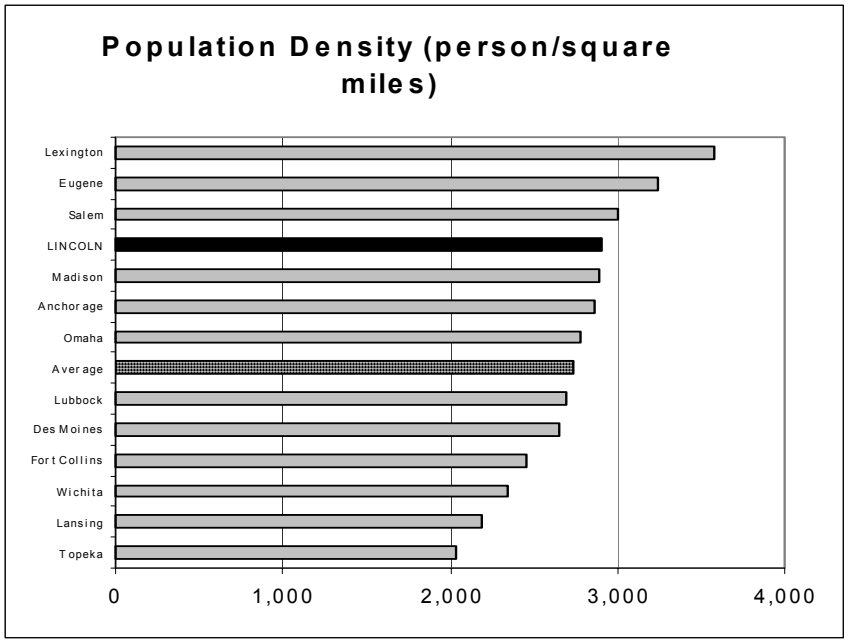
Demographic Data



Lincoln's population was 226,582 in year 2000. This ranks 7th among its peers and is 23 percent below the peer average.

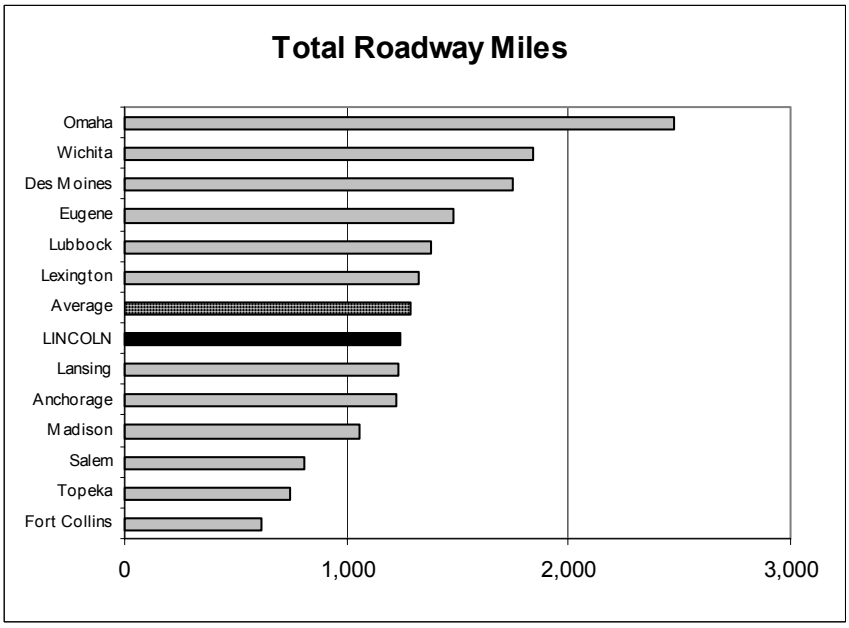


Lincoln's urban land area is 78.12 square miles. This ranks 8th among its peers and is 29 percent below the peer average.

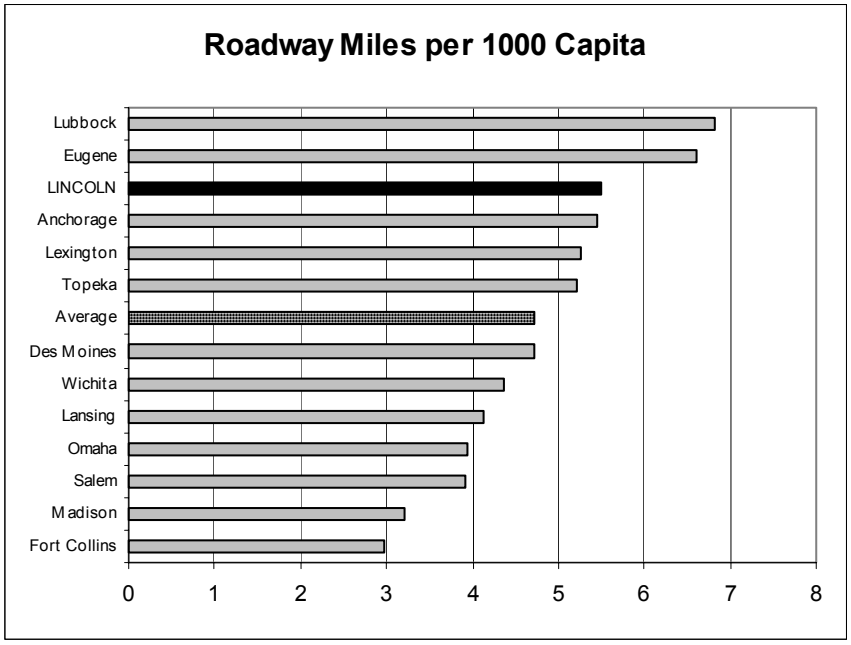


Lincoln's population density is 2905 persons per square mile. This ranks 4th among its peers and is 29 percent above the peer average.

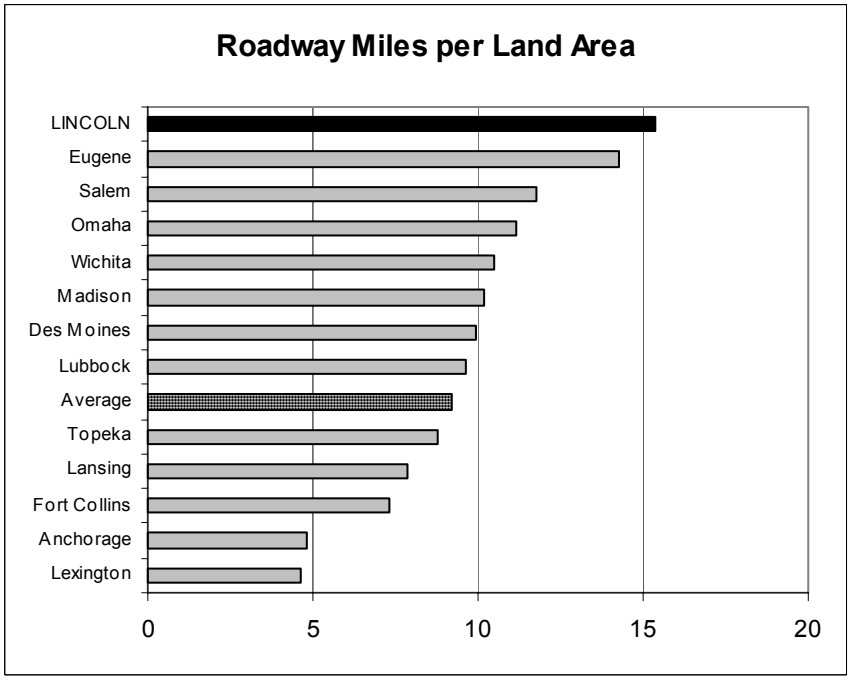
Highway System Data



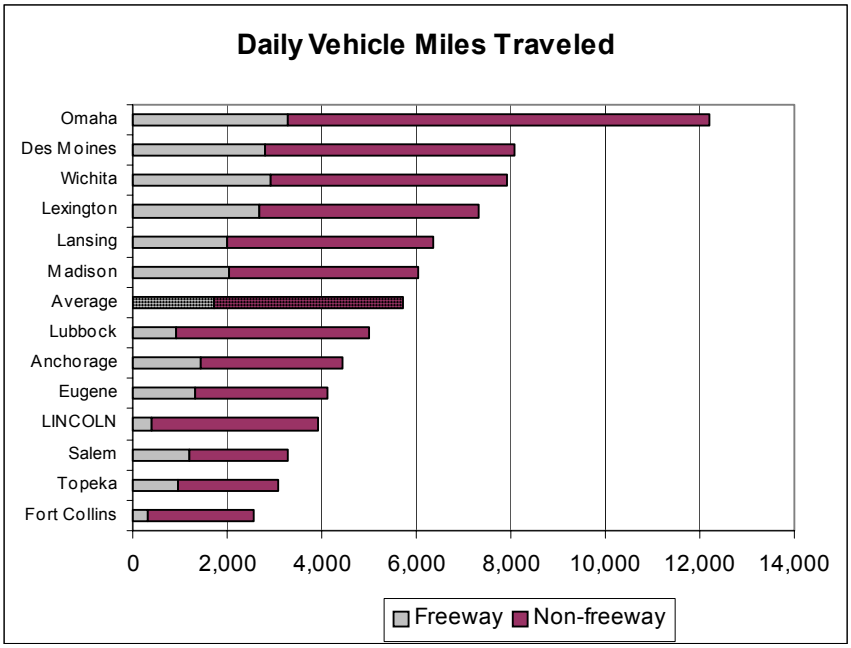
In Lincoln, the length of the roadway system is 1245 miles. This ranks 7th among its peers and is 4 percent below the peer average.



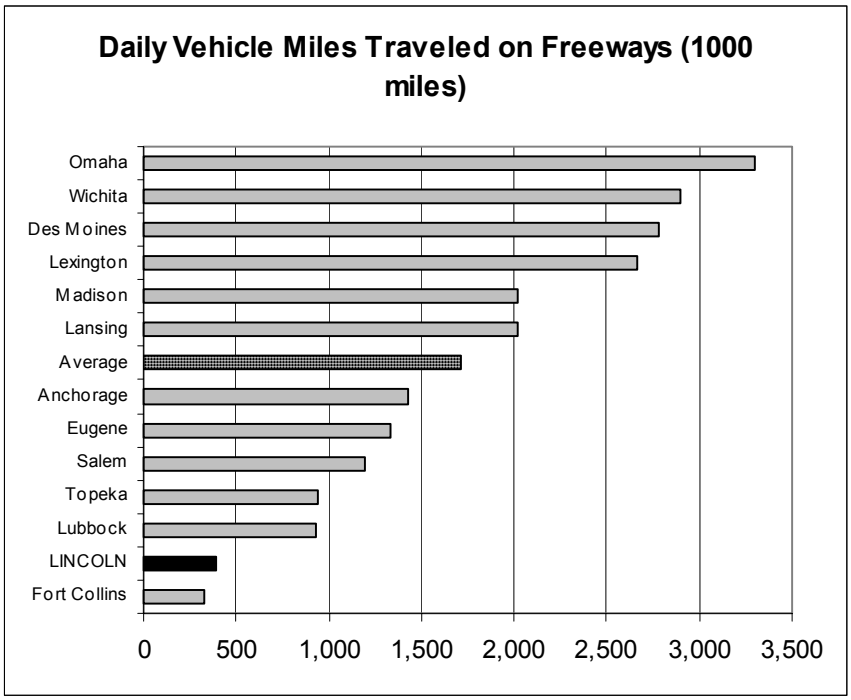
In Lincoln the amount of roadway per 1000 capita is 5.5 miles. This ranks 3rd among its peers and is 16 percent above the peer average.



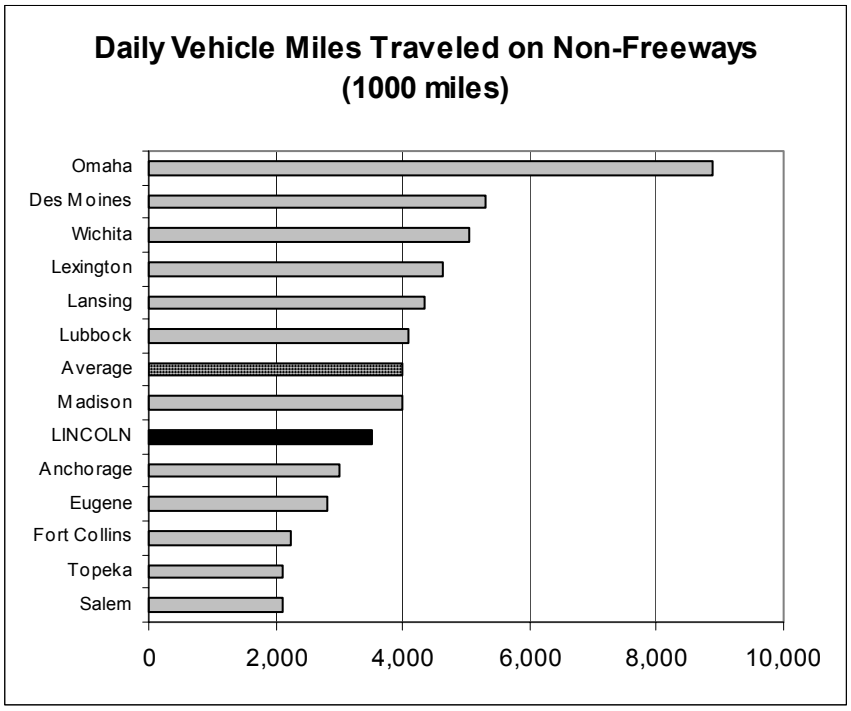
In Lincoln the amount of roadway per square mile of land is 15.4 miles. This ranks 1st among its peers and is 66 percent above the peer average.



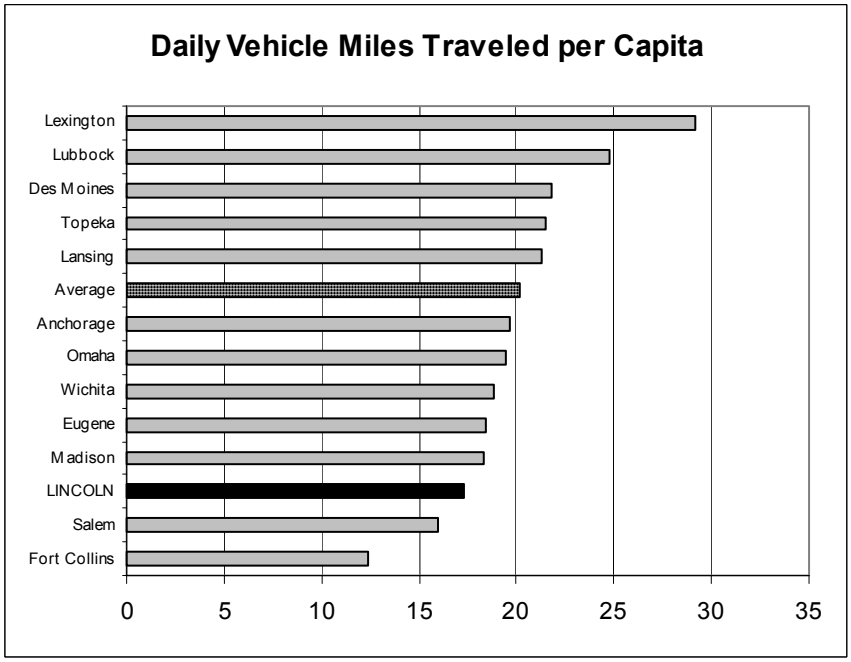
In Lincoln, the vehicle miles traveled (VMT) is 3.9 million miles per day. This ranks 10th among its peers and is 32 percent below the peer average. Freeways account for 10 percent of the daily VMT while non-freeways account for 90 percent.



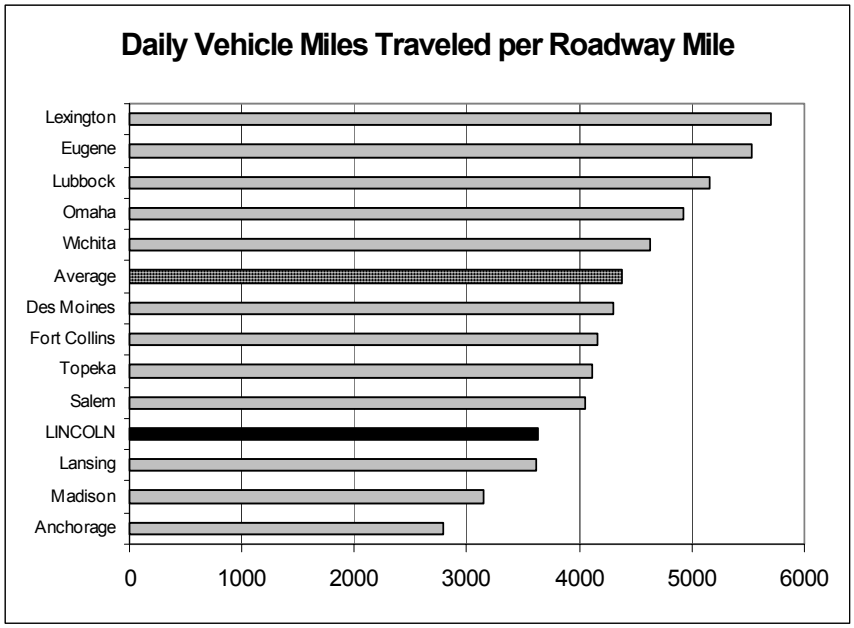
In Lincoln the total vehicle miles traveled on freeways is 0.4 million miles per day. This ranks 12th among its peers and is 77 percent below the peer average.



In Lincoln the total vehicle miles traveled on non-freeways is 3.5 million miles per day. This ranks 8th among its peers and is 12 percent below the peer average.

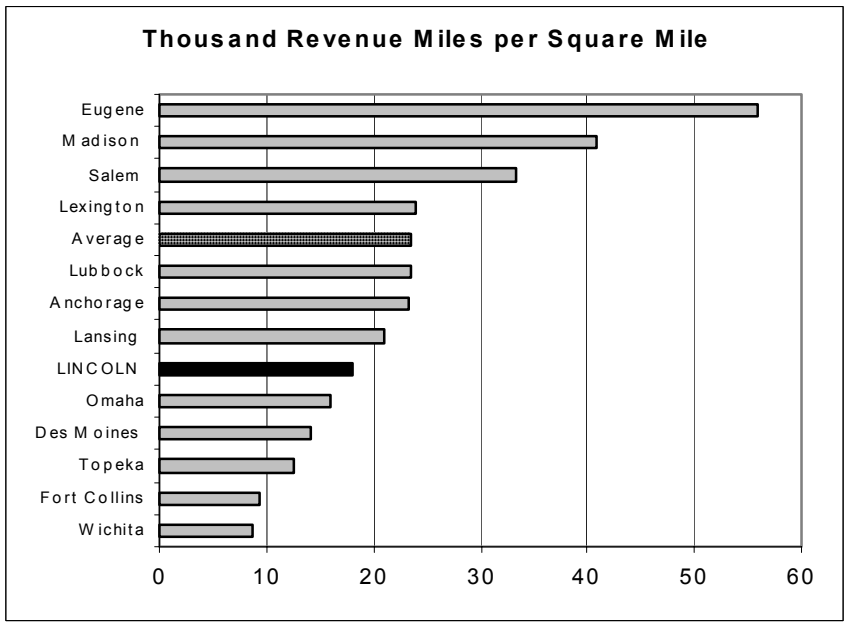


In Lincoln the daily vehicle miles traveled is 17.3 vehicle miles per capita. This ranks 11th among its peers and is 14 percent below the peer average.

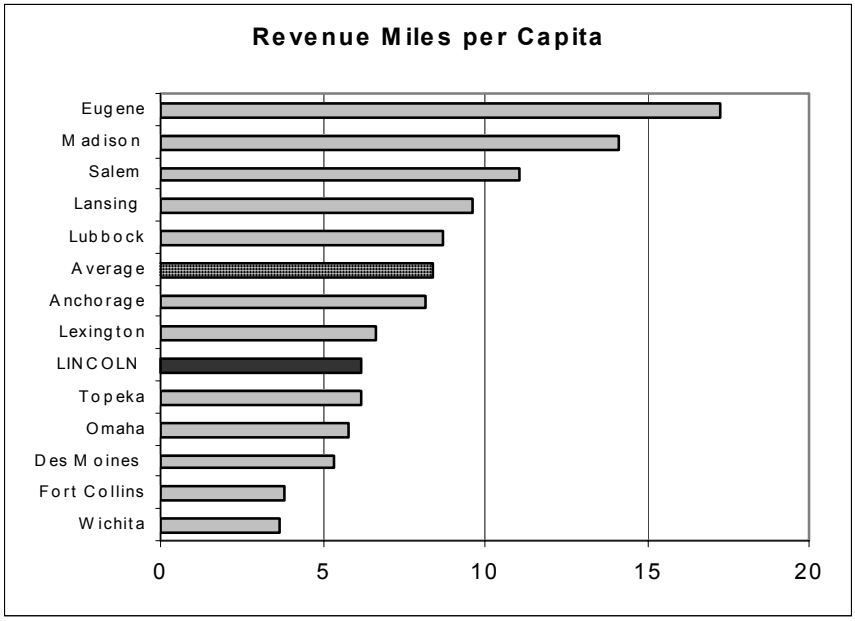


In Lincoln the daily vehicle miles traveled is 3,628 vehicle miles per roadway mile. This ranks 10th among its peers and is 17 percent below the peer average.

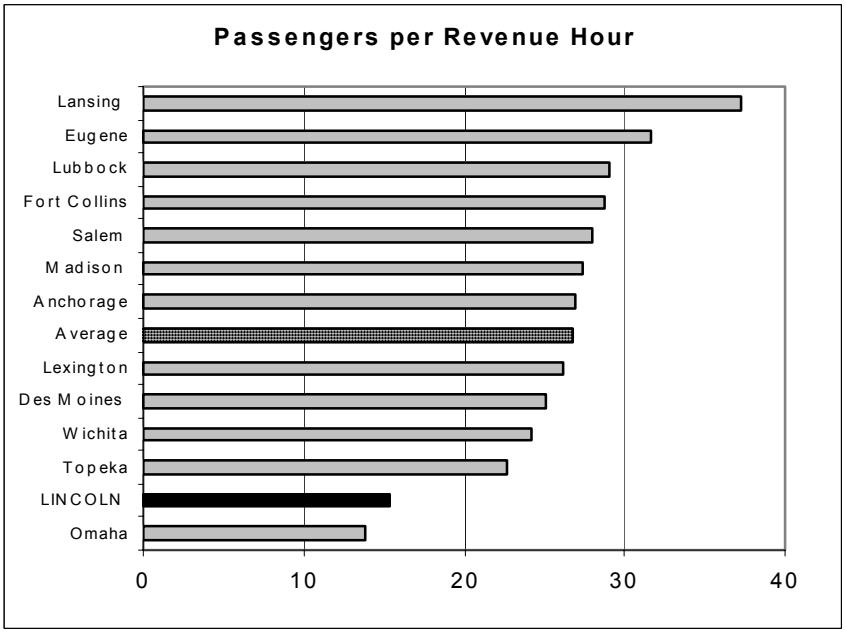
Regular Transit Service Comparisons



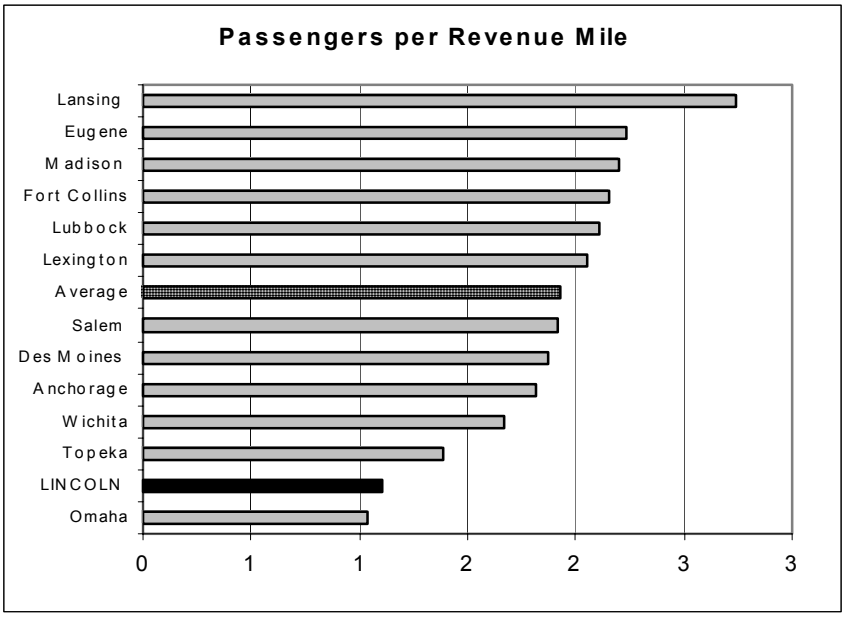
Lincoln's regular transit service revenue miles is 17,959 revenue miles per square mile. This ranks 8th among its peers and is 67 percent below the peer average.



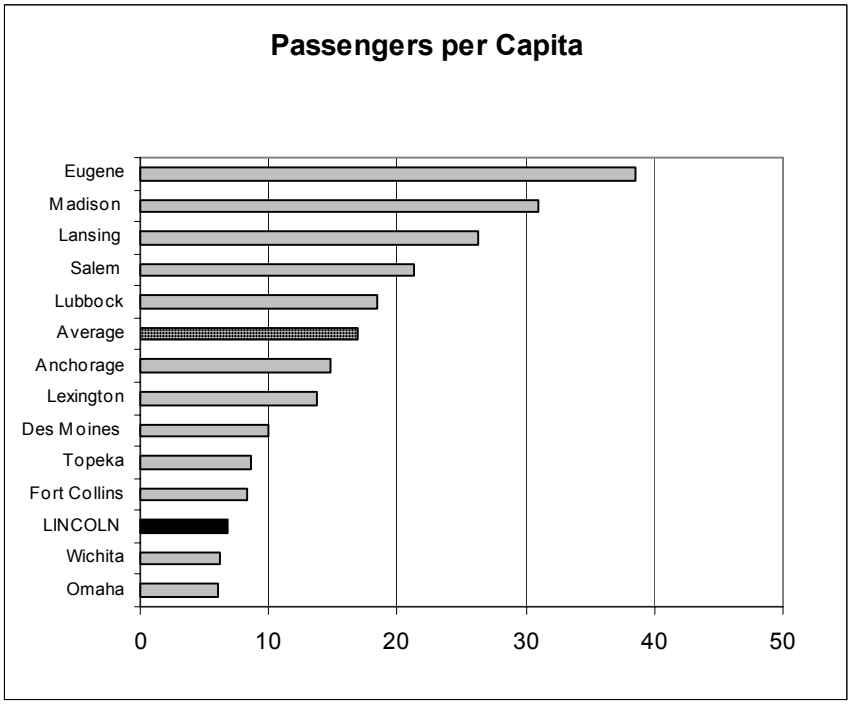
Lincoln's regular transit service revenue miles is 6.2 miles per capita. This ranks 8th among its peers and is 26 percent below the peer average.



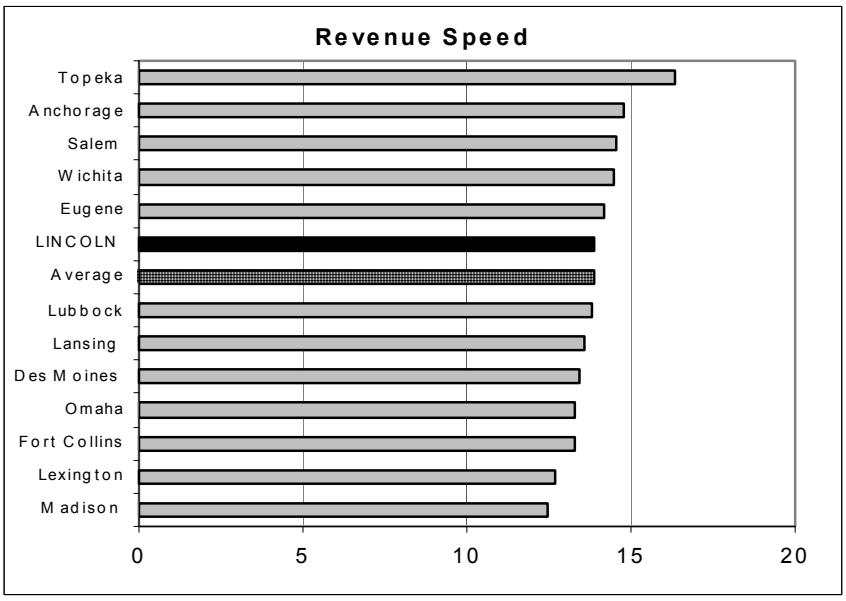
Lincoln's regular transit service carries 15.4 passengers per revenue hour. This ranks 12th among its peers and is 42 percent below the peer average.



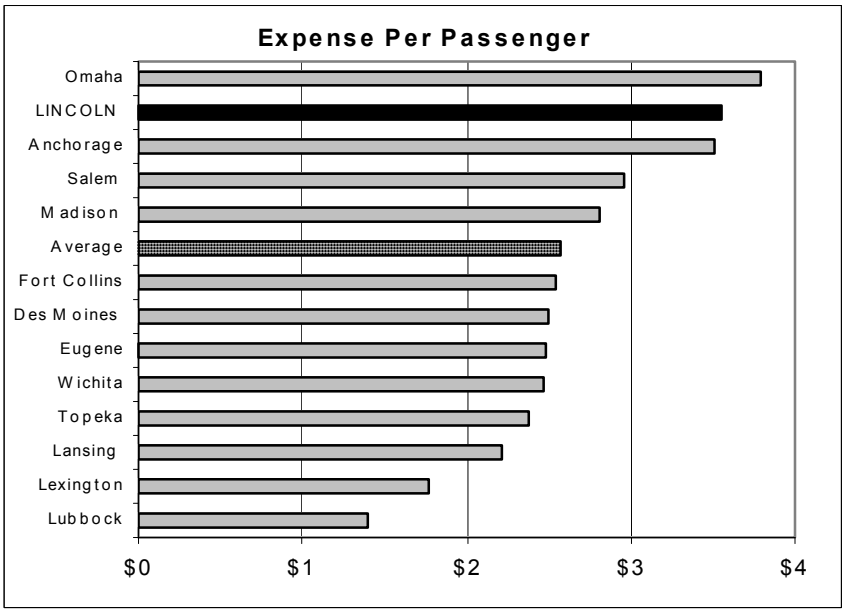
Lincoln's regular transit service carries 1.1 passengers per revenue mile. This ranks 12th among its peers and is 43 percent below the peer average.



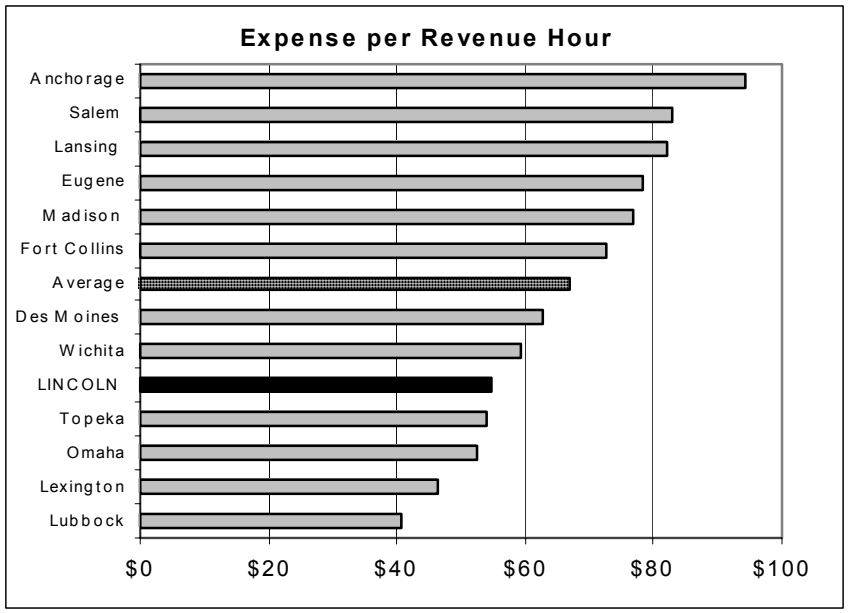
Lincoln's regular transit system carries 6.8 passengers per capita. This ranks 11th among its peers and is 60 percent below the peer average.



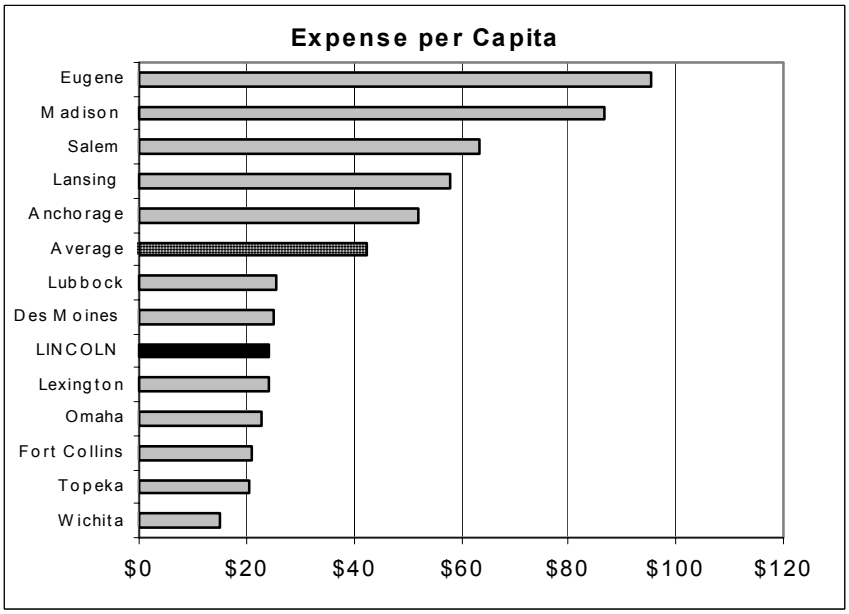
Lincoln's regular transit service revenue speed is 13.9 miles per hour. This ranks 6th among its peers and is equal to the peer average.



Lincoln's regular transit service operating cost is $ 3.50 per passenger. This ranks 2nd among its peers and is 38 percent above the peer average.

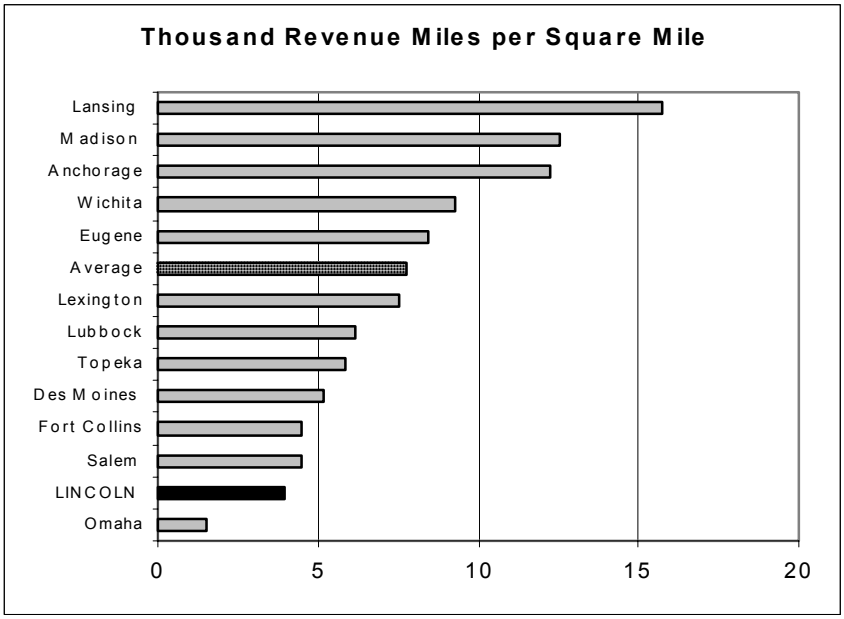


Lincoln's regular transit service operating cost is $ 54.60 per revenue hour. This ranks 9th among its peers and is 18 percent below the peer average.

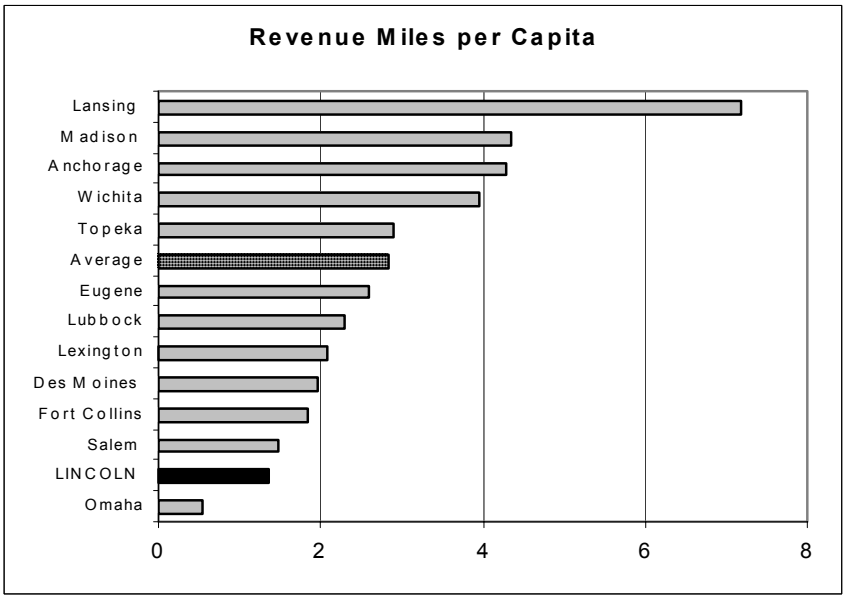


Lincoln's regular transit service operating cost is $ 24.30 per capita. This ranks 8th among its peers and is 43 percent below the peer average.

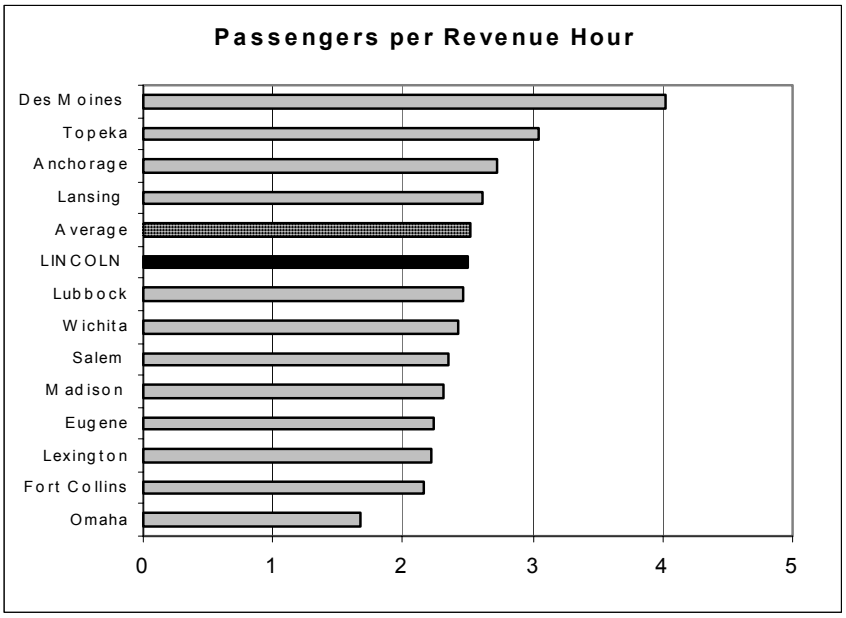
Demand-Responsive Transit Service Comparisons



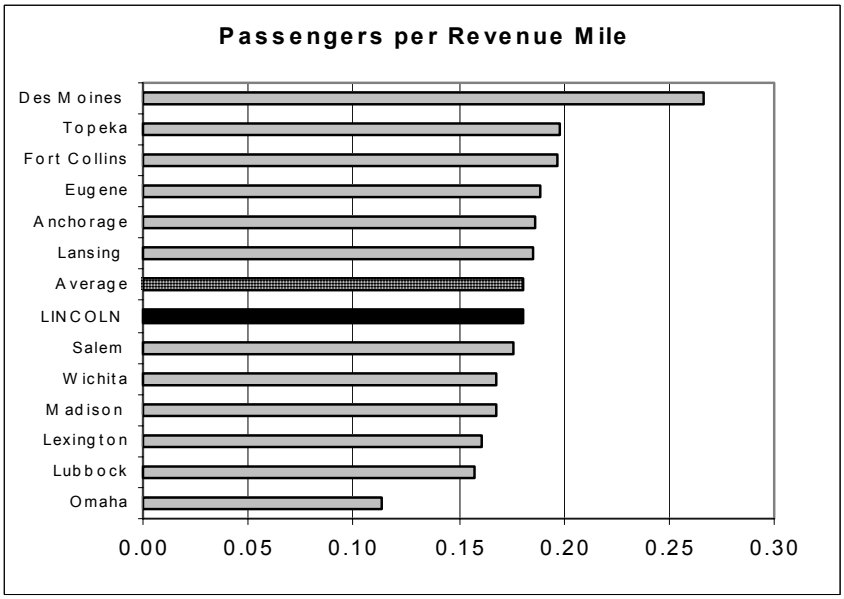
Lincoln's demand response service revenue miles is 3,955 revenue miles per square mile. This ranks 12th among its peers and is 53 percent below the peer average.



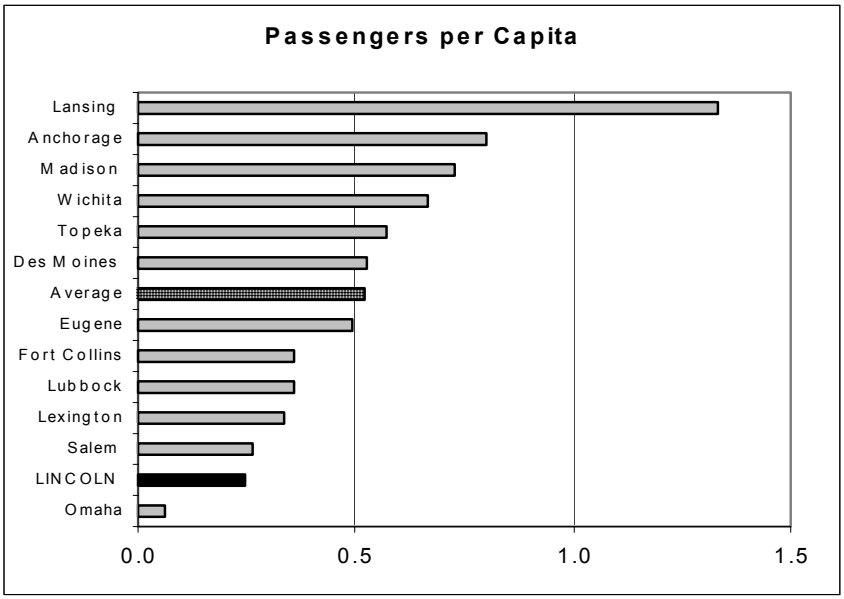
Lincoln's demand response service revenue miles is 1.4 miles per capita. This ranks 12th among its peers and is 52 percent below the peer average.



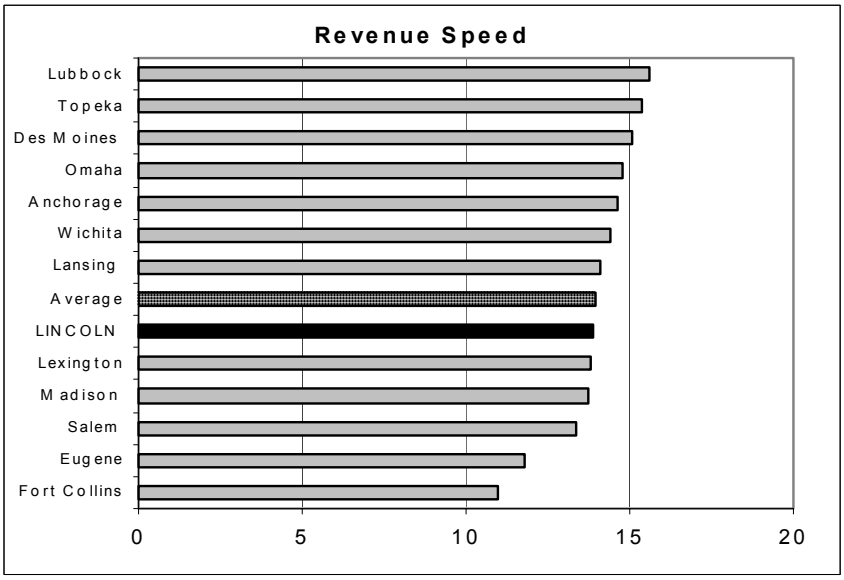
Lincoln's demand response service carries 2.5 passengers per revenue hour. This ranks 5th among its peers and is 1 percent below peer average.



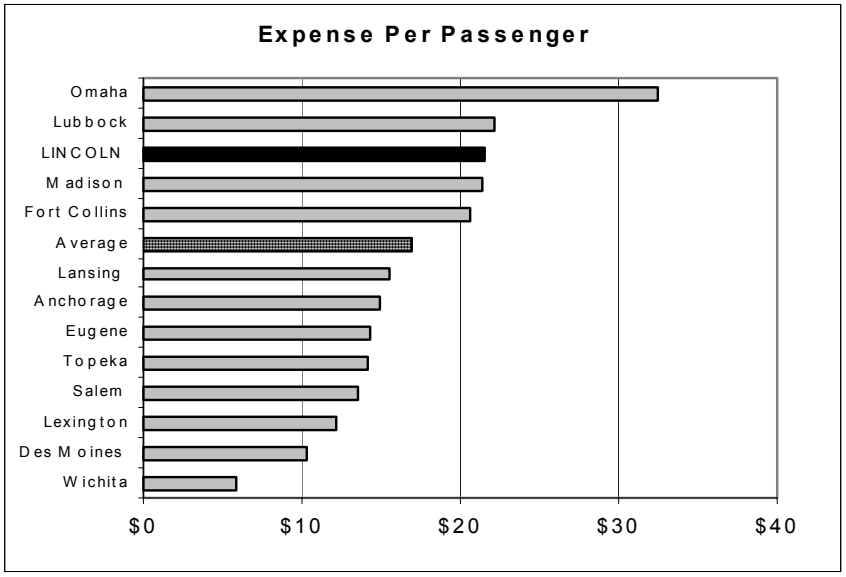
Lincoln's demand response service carries 0.18 passengers per revenue mile. This ranks 7th among its peers and is equal with the peer average.



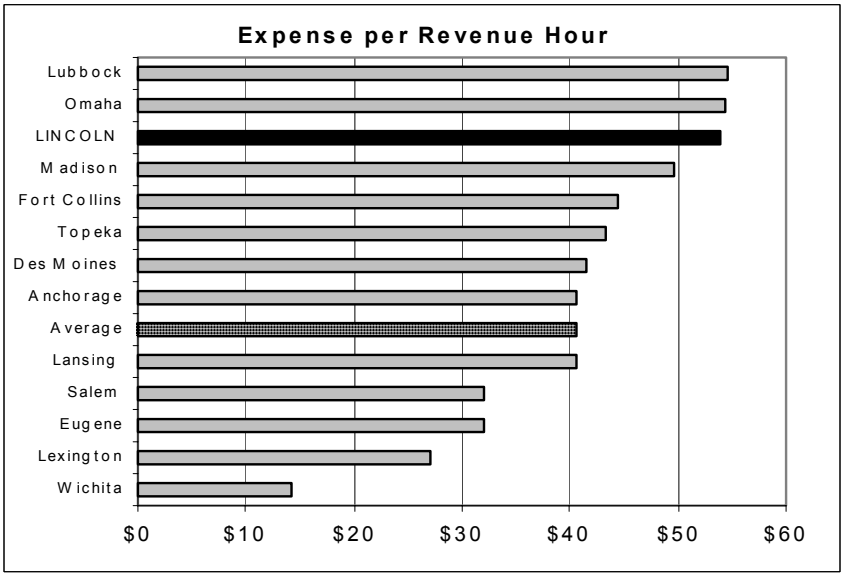
Lincoln's demand response service carries 0.2 passenger per capita. This ranks 12th among its peers and is 53 percent below the peer average.



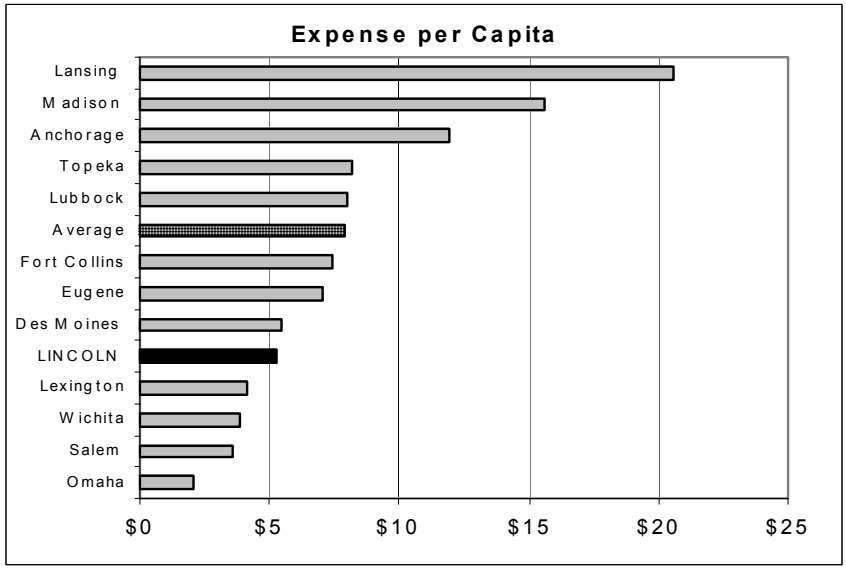
Lincoln's demand response service revenue speed is 13.9 miles per hour. This ranks 8th among its peers and is 1 percent below the peer average.



Lincoln's demand response service operating cost is $ 21.60 per passenger. This ranks 3rd among its peers and is 28 percent above the peer average.

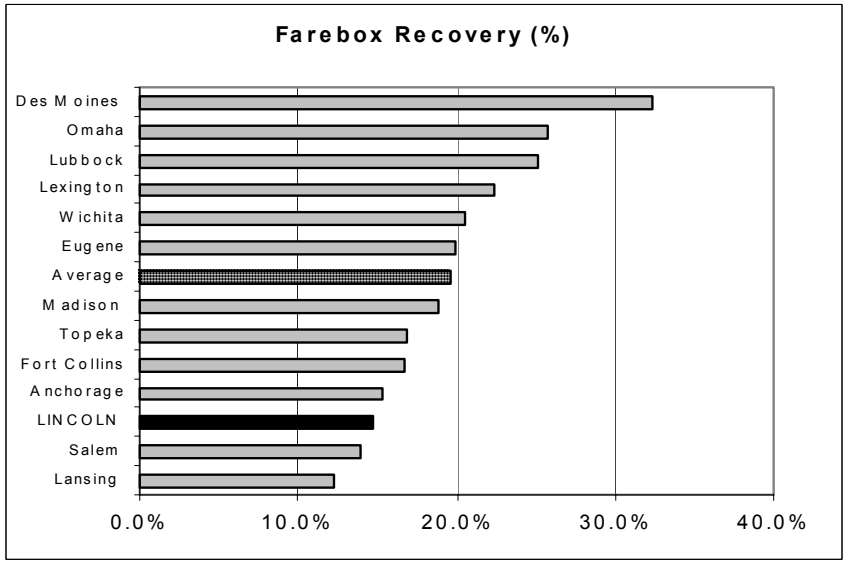


Lincoln's demand response service operating cost is $ 54.60 per revenue hour. This ranks 9th among its peers and is 18 percent above the peer average.

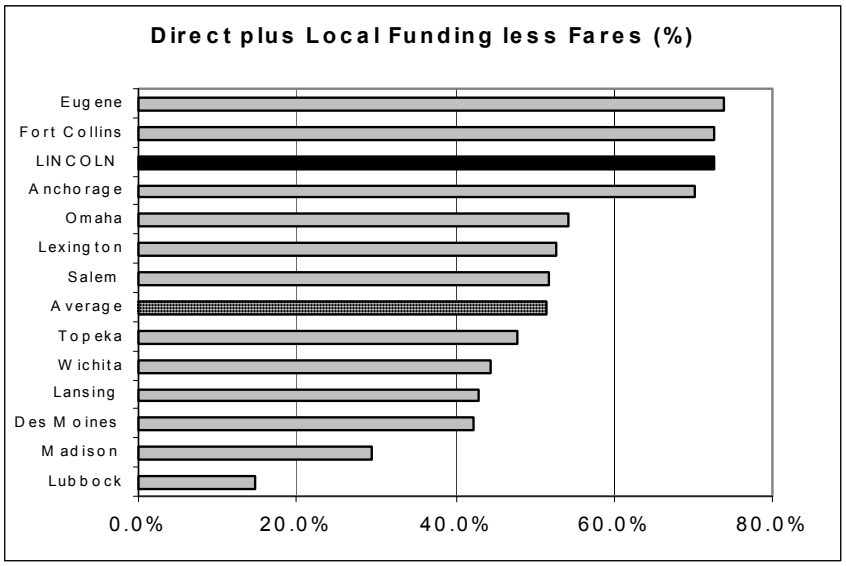


Lincoln's demand response service operating cost is $ 5.30 per capita. This ranks 5th among its peers and is 33 percent below the peer average.

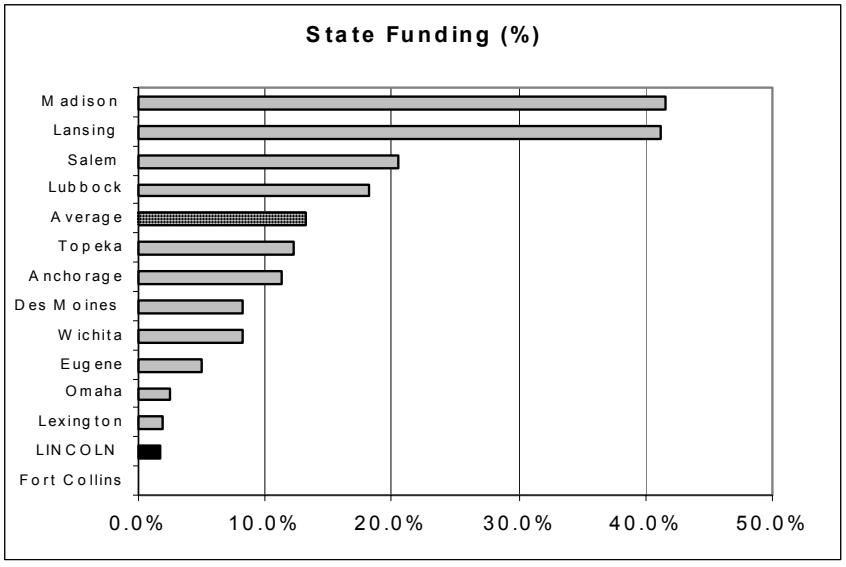
Transit Funding Comparisions



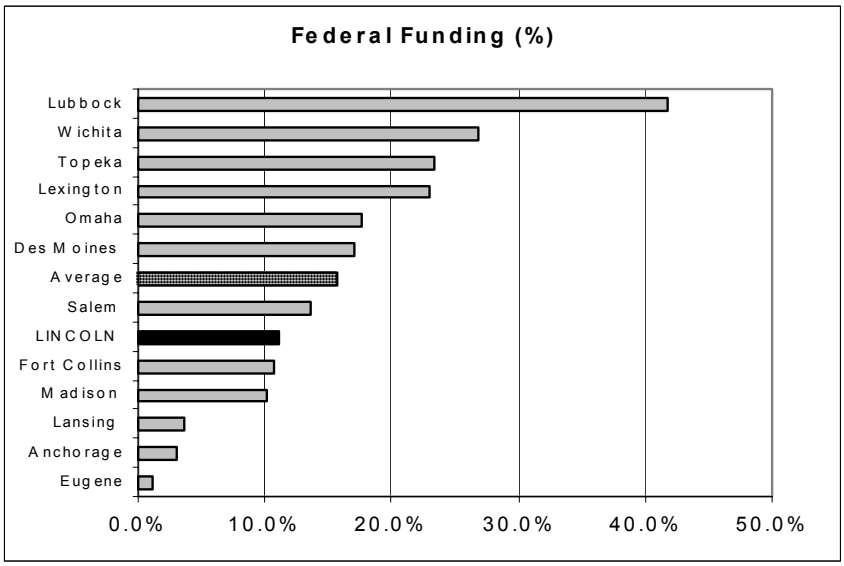
Lincoln's overall transit fare box recovery ratio is 14.7 percent. This ranks 11th among its peers and is 25 percent below the peer average.



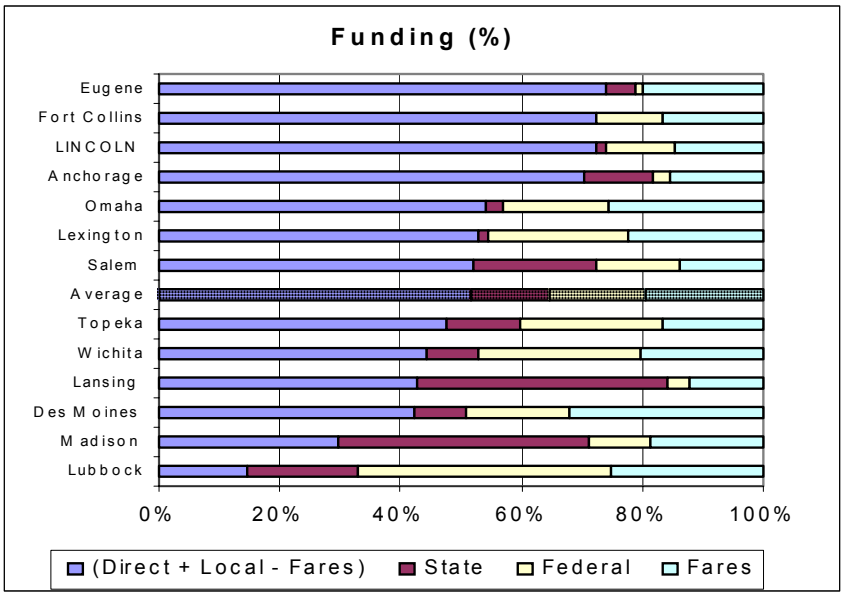
In Lincoln, locally generated funding as a percentage of total transit operating cost is 72.5 percent. This ranks 3rd among its peers and is 41 percent above the peer average.



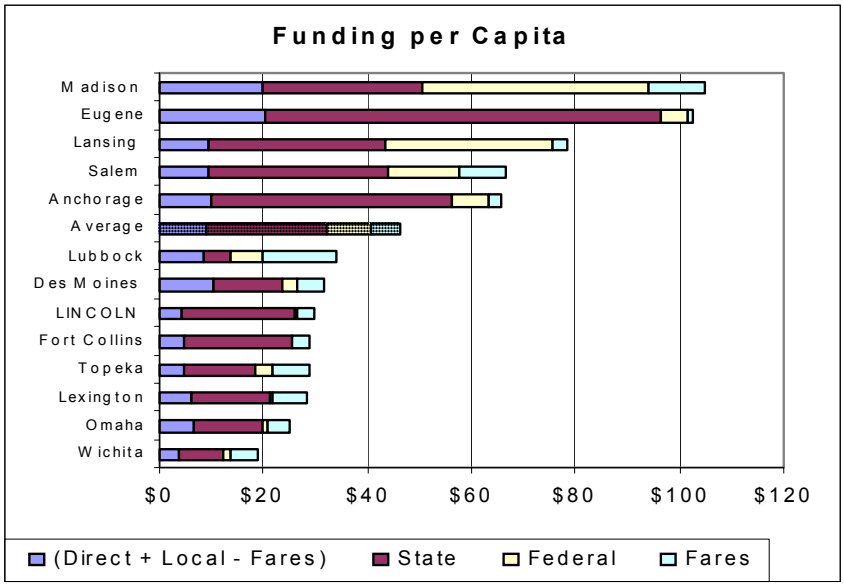
In Lincoln the percentage of state funding as of total transit operating cost is 1.6 percent. This ranks 12th among its peers and is 88 percent below the peer average.



In Lincoln the percentage of federal funding as of the total transit operating cost is 11.1 percent. This ranks 8^{h} among its peers and is 29 percent below the peer average.



Lincoln's locally generated, state and federal funding and fare box recovery as percentage of the total transit operating cost is shown. Lincoln is significantly above average in local funding, but it is significantly below average in state funding. Lincoln is slightly below average in fare box recovery and federal funding as well.



Lincoln's total transit funding is $ 29.60 per capita. This ranks 8th among its peers and is 36 percent below the peer average.

Chapter 3

Assessment of Perceptions and Attitudes

Summary of Interviews Conducted

The views expressed in this section are not to be considered a representative sample of Lincoln's overall view of modes of transportation, but rather a starting point of discussion on transit, bicycling, walking, and planning issues. Informal interviews were conducted by the planning consultants and City staff during August of 2003. Those interviewed included representatives of social services agencies, private charitable organizations, transit advocates, bicycling advocates, members of City advisory committees, land developers and their representatives, business and downtown representatives, members of the Planning Commission or City Council, and the Mayor.

Bus Transit

Those interviewed tended to express general dissatisfaction and concern with the StarTran bus service. It was generally suggested that the bus service was infrequent, did not go where riders needed to go and did not run enough or at all during nights and weekends. The length of time that a rider must spend on a bus, coupled with a walk from the origin, a wait, a walk at the destination, and possibly a Downtown transfer, makes using the bus inconvenient.

Compounding the problem of the infrequent service is the route structure. The routes focus on Downtown because it has the greatest concentration of jobs and, thus, is most efficient for transit service. While Downtown Lincoln has a fairly large job base and is gaining economic strength, many of Lincoln's industrial or retail jobs are located outside the central business districts in locations not well served by the bus lines.

Especially problematic is the fact that there is no service after 7 PM, making it impossible to ride the bus home from a second-shift job, infrequent service on Saturdays, and no service on Sundays.

In contrast with the convenience of the automobile, the inconvenience of riding a bus to work, college or elsewhere limits ridership to those who have no better option. That usually includes those in the lowest income groups and those who cannot drive because of age or disability.

Transit service for the disabled was described as being equally frustrating. The Handi Van service operated by StarTran tended not to arrive when promised (within a two-hour "window" was considered on-time) at either end of a trip. Private van service provides better service but is expensive.

Bicycling

Those interviewed expressed that the older neighborhoods of Lincoln are well suited for bicycling because they offer a system of interconnected minor streets that is easily understood. However, the streets in the newer neighborhoods, while interconnected, are not as easily understood.

There are no on-street bicycling lanes in Lincoln. In the older sections of town, it appears that nearly every arterial road uses the entire curb-to-curb paved surface for traffic lanes and parking, making it very difficult if not impossible to retrofit them with five-foot bicycling lanes. In addition, the current design practice for new arterial roads does not specifically provide for new on-street bicycle lanes or amenities.

There is a network of bicycle routes designated by signs, but signs offer little protection or comfort. Thus, in perimeter locations, bicyclists are compelled to ride on side trails or sidewalks along arterial streets or on the busy road itself.

It was expressed that Lincoln has an extensive and growing system of off-road paths in linear parks along floodplain and former railroad corridors. Because of historic circumstances, these trails tend to be radial from approximately the Downtown. However, they are not completely inter-connected by on-street trails, on-street lanes or local streets. The fact that they are not part of a network limits their use for non-recreational trips. However, they are enjoyed and used by recreational bicyclists because they are safe, scenic, relaxing and separated from traffic by attractive bridges over major roads. A savvy bicyclist can often combine one of these off-road paths with low-traffic local streets and a few arterials to create an effective route for work, school, errands or play.

It was pointed out that once at a destination, there are few designated places to lock a bicycle, with the possible exception of the University of Nebraska main campus or a few major facilities oriented toward youth such as swimming pools or parks.

Walking

Those interviewed suggested that the sidewalk system in Lincoln is comprehensive, extensive and generally well-maintained. Nearly every minor or major street has a sidewalk on at least one side, usually on both sides. There are curb cuts at nearly every intersection, making use much easier for wheelchair users and young bicyclists. People may also walk on the trail system.

However, the low-density and dispersed nature of land development in Lincoln makes walking an impractical option for most trips. The design of nearly all commercial and industrial sites in Lincoln ignores the needs of pedestrians, so whether one arrives by bus or foot, a hike across a parking lot is encountered.

Planning Observations

The recent *Lincoln Comprehensive Plan* should be used as a starting point and basis for recommendations. However, consultants and staff may look beyond the planning horizon 25 to 50 years into the future if necessary. Plans for a more transit-oriented future may entail proposing some new ideas that go further than the *Comprehensive Plan*. The *Multi-Modal Transportation Study* should include "vision" and guiding principles for the community.

Chapter 4

Sigma Group Survey on the Public Attitudes and Opinions Regarding Multi-Modal Transportation Issues in Lincoln, NE

Purpose of Survey

The Lincoln/Lancaster County Planning Department commissioned Sigma Group of Lincoln, NE, as a subcontractor to SRF Consulting Group, to conduct a statistically reliable telephone survey on the attitudes of Lincoln area households toward multi-modal transportation issues. The study was intended to document the public's perceptions of various transportation planning and development issues facing local officials as plans are considered to expand multi-modal travel opportunities in the greater Lincoln community. The information gained with this effort is intended to be used to gain a better understanding of the attitudes and behaviors of Lincoln area residents toward providing a wider range of mobility options.

Methodology

To create a statistically reliable survey, a random sample of 503 respondents in 22 Lincoln zip codes was selected and interviewed between September 24, 2003, and October 18, 2003. A proportionate sampling technique was used to provide a representative sample and sufficient confidnece in the study sub-regions, without having to conduct an unusualy large total number of surveys. The maximum expected statistical range of error for a sample of 503 respondents is ±4.4%**.** Thus, if 100 different samples of 503 persons each were randomly chosen from the given population, 95 times out of 100 the total results obtained would vary no more than ±4.4 percentage points from the results that would be obtained if the entire population was surveyed.

Survey Results

The results of the survey are attached as part of this document as Appendix A in the form of Sigma Group's narrative report of the results of the survey. The findings indicate a general interest in multi-modal issues from Lincoln residents. These findings were presented to the Multi Modal Transportation Task Force by Dennis Nutter of Sigma Group on December 16, 2003.